

Application No.: 10/765,208

Amendment to the Drawings:

Figure 1 has been amended to correct the margins, as in the attached Replacement Sheet.

REMARKS

This Amendment is filed in response to the Office Action dated February 23, 2006. This application should be allowed and the case passed to issue. No new matter is raised by this amendment. The amendment to claim 4 is supported by originally filed claims 1 and 5. Claims 1, 2, 3, 5, 12, and 13 are amended to maintain correct dependency.

Claims 1-24 are pending in this application. Claims 1-5 have been rejected. Claims 6-24 were withdrawn pursuant to a restriction requirement. Claims 1-5, 12, and 13 have been amended.

Restriction

Reconsideration of the restriction requirement is respectfully requested. The intermediate-final product grounds for restriction is improper. Groups I and II of the instant claims are related as subcombination and combination. As explained in MPEP § 806.05(j), in an intermediate-final product relationship the intermediate typically loses its identity. The fact that the intermediate does not lose its identity in the instant claims, is no "mere" fact as alleged by the Examiner, but rather an important fact. As further explained in MPEP § 806.05(j), "an intermediate product and a final product can be shown to be distinct inventions if the intermediate and final products are mutually exclusive inventions (not overlapping in scope) " Claim 12 contains all the limitations of independent claim 4 and thus, is overlapping in scope. Clearly, these claims are not related as intermediate-final product, according to the United States Patent Office's examining guidelines.

Drawings

The drawings were objected to because the margins on page 1 appear to be incorrect.

In response to this objection, Fig. 1 has been amended to correct the margins.
A REPLACEMENT SHEET containing amended Fig. 1 is attached to this response.

Obviousness Double Patenting

Claims 1-5 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-20 of copending Application No. 10/776,222.

Claims 1-5 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-25 of copending Application No. 10/764,602.

These rejections are traversed, and reconsideration and withdrawal thereof respectfully requested. The following is a comparison between the instant invention, as claimed, and the cited prior art.

An aspect of the invention, per claim 4, is a multiple layer structure comprising in overlying, contacting sequence a first crystalline layer comprising a first *fcc* material having a $\langle 111 \rangle$ preferred growth orientation and a first $\{111\}$ lattice parameter, a second crystalline layer comprising a second *fcc* material having a $\langle 111 \rangle$ preferred growth orientation and a second $\{111\}$ lattice parameter different from the first $\{111\}$ lattice parameter, and a third crystalline layer comprises an *hcp* material having a $\langle 0002 \rangle$ preferred growth orientation and a $\{0002\}$ lattice parameter more closely matched to the second $\{111\}$ lattice parameter than to the first $\{111\}$ lattice parameter. The first *fcc* material is selected from the group consisting of: Ag, Au, Pt, Pd, Al, Rh, Ir, Pb, Ca, Sr, Yb, and alloys based thereon. The second *fcc* material is selected from the group consisting of: Ag, Cu, Au, Ni, Pt, Pd, Al, Rh, Ir, Pb, Ca, Sr, Yb, and alloys based thereon. The *hcp* material is selected from the group consisting of: Ru, Ti, Co, Re, Be, Mg, Sc,

Application No.: 10/765,208

Zn, Se, Zr, Cd, Te, La, Hf, Os, Tl, Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm, Lu, Y, and alloys based thereon.

The Examiner acknowledged that the claims of the '222 application do not claim that one of the crystalline layers is provided with stronger out-of-plane growth orientation nor the atomic spacing mismatch. The Examiner considered that the disclosure of the '222 application (paragraphs [0039] - [0042] and [0062] - [0068]) teaches that the presently claimed invention is obvious.

The Examiner acknowledged that the claims of the '602 application do not claim that one of the crystalline layers is provided with stronger out-of-plane growth orientation. The Examiner considered that the disclosure of the '602 application (paragraphs [0013] - [0015] and [0064] - [0067]) teaches that the presently claimed invention is obvious.

Claims 1-5 of the present application are not obvious in view of the claims of the '222 and '602 applications because the claims of the '222 and '602 applications do not suggest the multi-layer structure as required by claim 4. The relevant issue in obviousness-type double-patenting rejections the issue is whether the claims of the references render the claims of instant application obvious. Contrasting the claims of the '222 and '602 applications with the present applications, it is clear that claim 4 of the present application is not obvious in view of the claims of '222 and '602 applications. The portions of the '222 and '602 applications cited by the Examiner as supporting the Examiner's determination of obviousness, do not cure the deficiencies of the claims of the '222 and '602 applications. The combination of cited portions of the '222 and '602 specifications with their respective claims do not render the instant claims obvious.

Claim Rejections Under 35 U.S.C. § 102

Claims 1-5 were rejected under 35 U.S.C. § 102(b) as being anticipated by Lambeth et al. (WO 99/24973). This rejection is traversed, and reconsideration and withdrawal thereof respectfully requested.

The Examiner averred that Lambeth et al. disclose a multi-layer structure comprising a pair of spaced-apart crystalline layers of different materials with an intermediate crystalline layer between and in contact with each of said pair of crystalline layers. The Examiner maintained that Lambeth et al. disclose first, second, and third crystalline layers meeting the claimed limitations.

Lambeth et al. do not disclose the claimed layer structure because Lambeth et al. do not disclose the *fcc/fcc/hcp* layers comprising wherein the first *fcc* material is selected from the group consisting of: Ag, Au, Pt, Pd, Al, Rh, Ir, Pb, Ca, Sr, Yb, and alloys based thereon. The second *fcc* material is selected from the group consisting of: Ag, Cu, Au, Ni, Pt, Pd, Al, Rh, Ir, Pb, Ca, Sr, Yb, and alloys based thereon. The *hcp* material is selected from the group consisting of: Ru, Ti, Co, Re, Be, Mg, Sc, Zn, Se, Zr, Cd, Te, La, Hf, Os, Tl, Pr, Nd, Gd, Tb, Dy, Ho, Er, Tm, Lu, Y, and alloys based thereon.

The Examiner asserted that the NiFe, Ag, and Ti layers of Lambeth correspond to the claimed first *fcc*, second *fcc*, and *hcp* materials. However, claim 4 requires that the first *fcc* material is selected from the group consisting of Ag, Au, Pt, Pd, Al, Rh, Ir, Pb, Ca, Sr, Yb, and alloys based thereon. Thus, the NiFe layer of Lambeth et al. cannot correspond to the claimed first *fcc* material.

The factual determination of lack of novelty under 35 U.S.C. § 102 requires the disclosure in a single reference of each element of a claimed invention. *Helifix Ltd. v. Blok-Lok*

Application No.: 10/765,208

Ltd., 208 F.3d 1339, 54 USPQ2d 1299 (Fed. Cir. 2000); *Electro Medical Systems S.A. v. Cooper Life Sciences, Inc.*, 34 F.3d 1048, 32 USPQ2d 1017 (Fed. Cir. 1994); *Hoover Group, Inc. v. Custom Metalcraft, Inc.*, 66 F.3d 399, 36 USPQ2d 1101 (Fed. Cir. 1995); *Minnesota Mining & Manufacturing Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 24 USPQ2d 1321 (Fed. Cir. 1992); *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051 (Fed. Cir. 1987). Because Lambeth et al. do not disclose a multiple layer structure comprising an *fcc/fcc/hcp* structure wherein the first *fcc* material is selected from the group consisting of: Ag, Au, Pt, Pd, Al, Rh, Ir, Pb, Ca, Sr, Yb, and alloys based thereon, as required by claim 4, Lambeth et al. do not anticipate claim 4.

Applicant further submits that Lambeth et al. do not suggest the claimed multiple layer structure.

The dependent claims are allowable for at least the same reasons as independent claim 1 and further distinguish the claimed multiple layer structure.

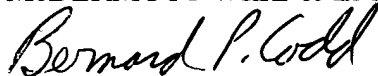
In view of the above amendments and remarks, Applicant submits that this case should be allowed and passed to issue. If there are any questions regarding this Amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

Application No.: 10/765,208

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

McDERMOTT WILL & EMERY LLP



Bernard P. Codd

Registration No. 46,429

600 13th Street, N.W.
Washington, DC 20005-3096
Phone: 202.756.8000 BPC:kap
Facsimile: 202.756.8087
Date: May 23, 2006

**Please recognize our Customer No. 49745
as our correspondence address.**